

CLAIMS

1. Assembly comprising a water turbine (2) and a rotary electrical generator (1), the rotor (4) of which is connected to the turbine (2), which turbine (2) comprises at least three axially directed blades (5) **characterized** in that each blade (5) is individually directly connected to the rotor (4) of the generator (1).
2. Assembly according to claim 1, **characterized** in that the turbine (2) comprises a first group of blades (5a) directed towards a first direction from the rotor (4) and a second group of blades (5b) directed towards the opposite direction from the rotor (4), with each group comprising at least 3 blades (5a, 5b).
3. Assembly according to claim 2, **characterized** in that each blade (5a) in the first group is arranged in coalignment with a blade (5b) in the second group.
4. Assembly according to claim 3, **characterized** in that blades (5a, 5b) located in coalignment are directly mechanically connected to each other.
5. Assembly according to claims 1–4, **characterized** in that each blade (5) is stayed by stay means.
6. Assembly according to claim 5, **characterized** in that the stay means comprises elements (6) that connect blades (5) to each other.
7. Assembly according to claim 6, **characterized** in that the stay means comprises element (6) directed radially inward from the respective blade (5), the radially innermost ends of which element are connected to each other.
8. Assembly according to claim 6, **characterized** in that the stay means comprises elements extending between each blade adjacent in the circumferential direction.
9. Assembly according to any one of claims 1–8, **characterized** in that each blade (5) is connected to the rotor via a **joint** device (10).

10. Assembly according to any one of claims 1–9, **characterized** in that the rotor (4) comprises permanent magnets (21).
- 5 11. Assembly according to any one of claims 1–10, **characterized** in that the stator (3) is encapsulated in a waterproof house.
12. Assembly according to any one of claims 1–11, **characterized** in that the rotor is situated radially outside the stator and in the same axial plane as the sta-
10 tor.
13. Assembly according to any one of claims 1–12, **characterized** in that the stator is wound with a high-voltage cable provided with a core (31) of conducting material, a first layer (32) of semiconducting material surrounding the conducting
15 material, a layer (33) of insulating material surrounding the first layer (32) and a second layer (34) of semiconducting material surrounding the insulating material.
14. Assembly according to any one of claims 1–13, **characterized** in that the stator (3) of the generator is rotatable and connected to a turbine (22) arranged to
20 rotate the stator (3) in the opposite direction to the rotor (4).
15. Assembly according to any one of claims 1–14, **characterized** in that the stator (9) is wound for three-phase.
- 25 16. Use of an assembly according to any one of claims 1–15 for the generation of electric current from underwater currents.
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